

# Census Divisions and Building Energy Modeling

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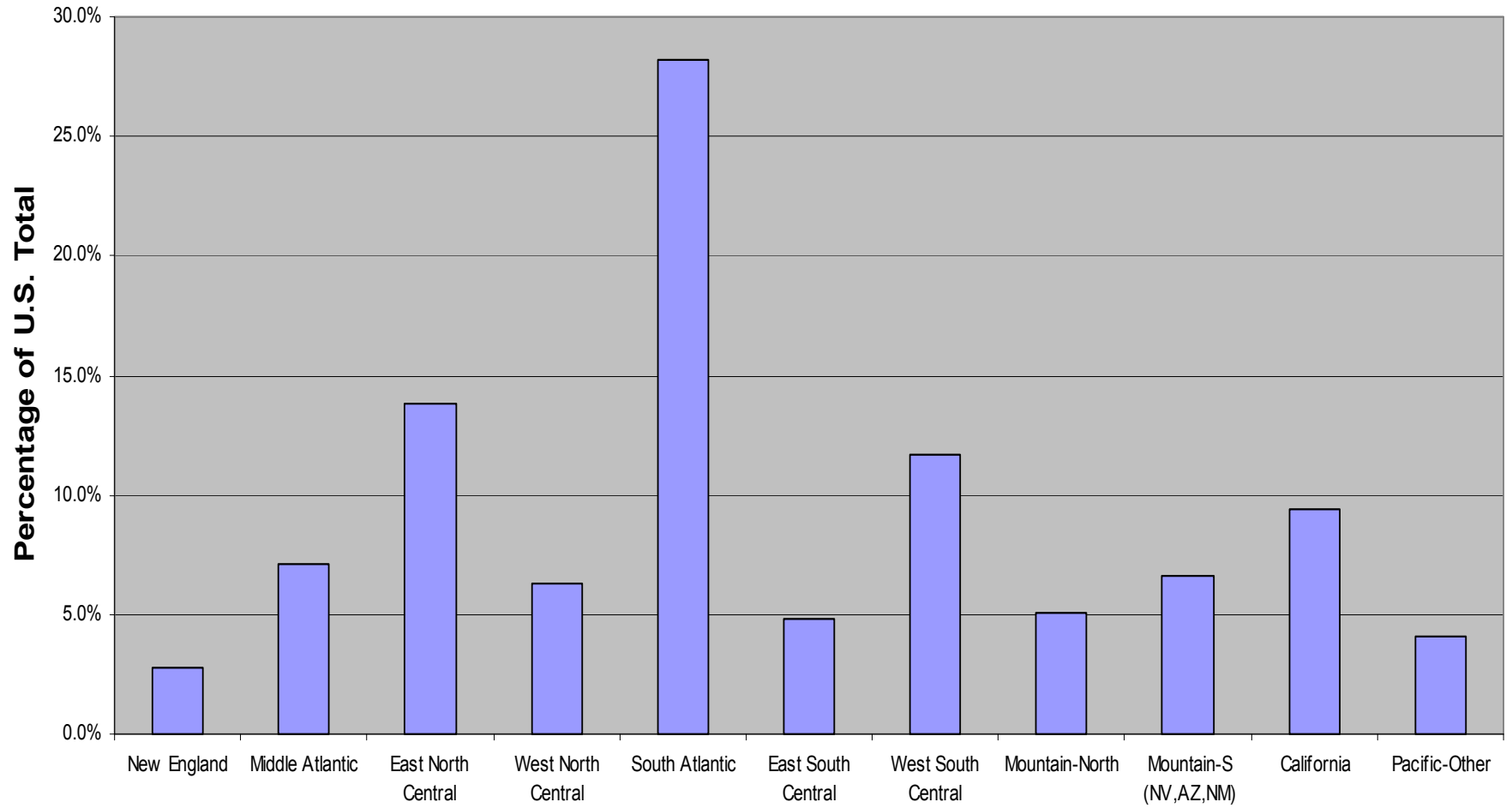
# Census Divisions and EIA Data

- Census divisions are lowest level of geographic detail in NEMS and building surveys (RECS, CBECS)
  - Tables in RECS for 4 most populous states
  - EIA climate zones can be crossed with census divisions to yield smaller areas – few observations
- Modest disaggregation would yield more homogeneous climatic regions

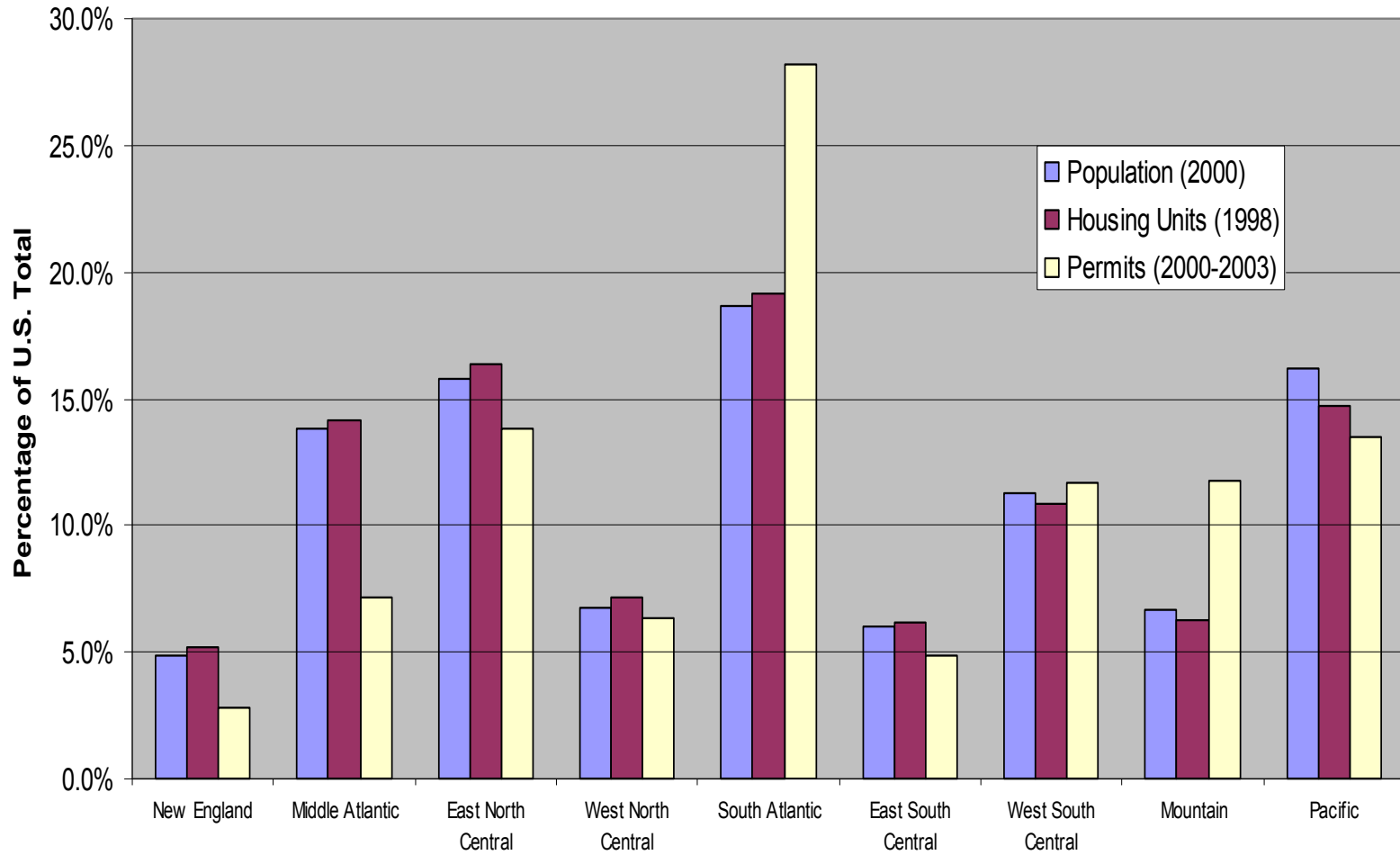
# Weather Variation and Census Divisions

- Mountain and Pacific divisions have wide range of heating and cooling requirements due to north-south orientation
  - EIA has placeholder for California in NEMS, but not implemented
  - In Mountain census division, fast growth in Arizona and Nevada with high cooling requirements
- Considerable variation in South Atlantic division as well
  - Division with highest amount of new construction--nearly 30% of U.S. in past four years
  - Florida accounts for nearly 40% of new construction in division, heating requirements considerably less than other states in division
- Advocate splitting divisions with entire states--facilitates data availability

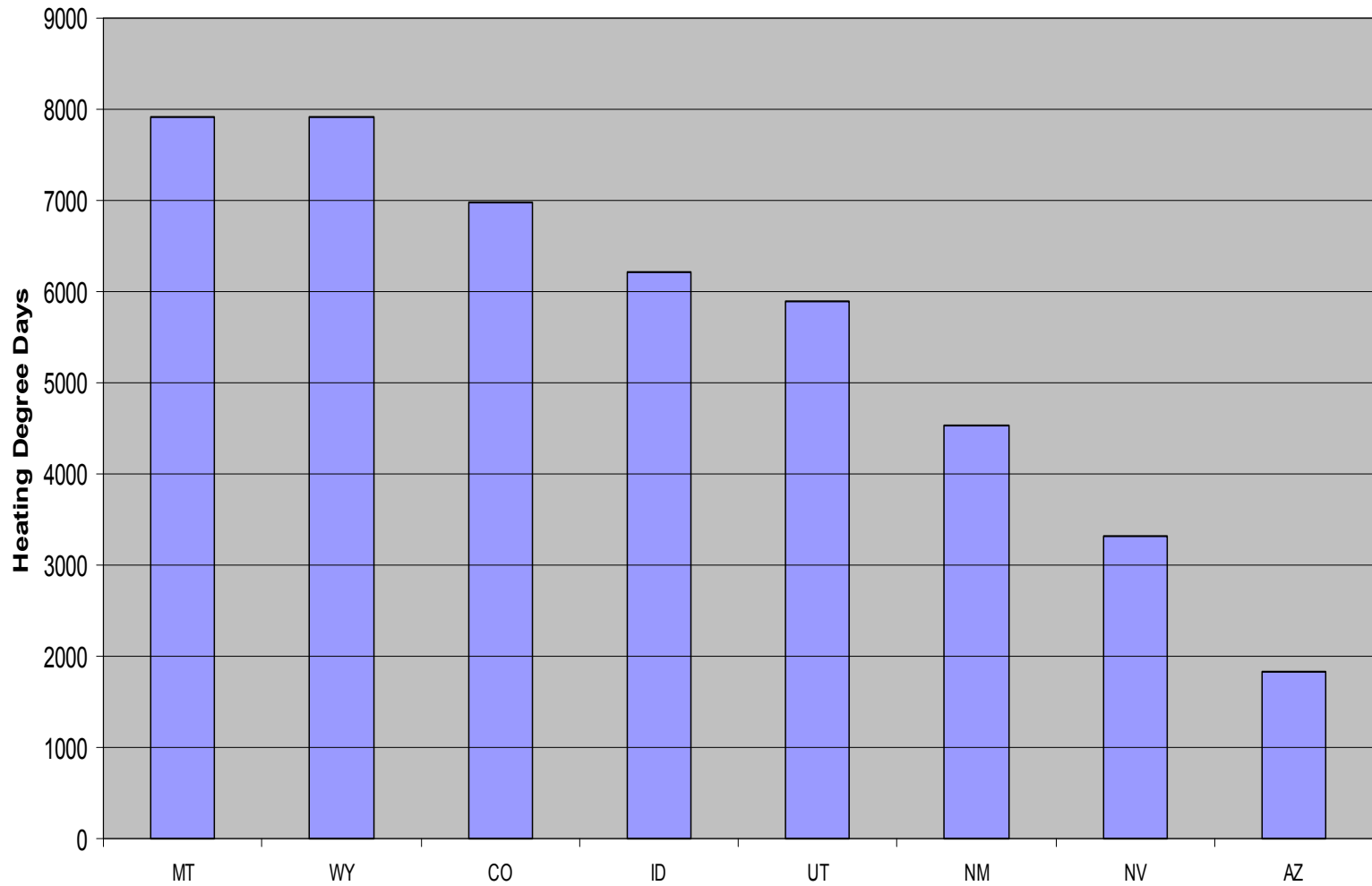
## Distribution of Residential Building Permits, Average over 2000-2003



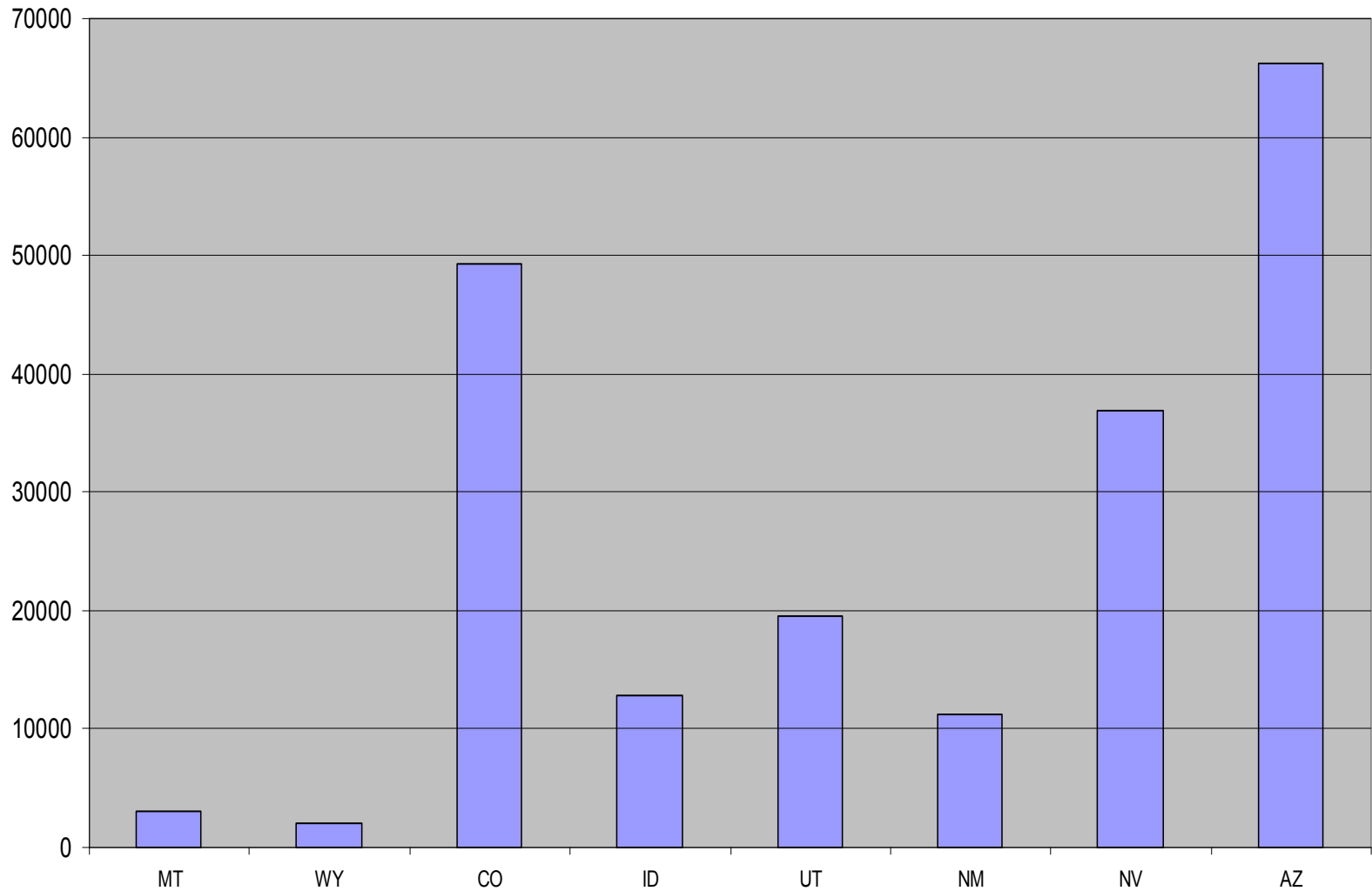
## Distribution of Population, Housing Units, and Permits by Census Division



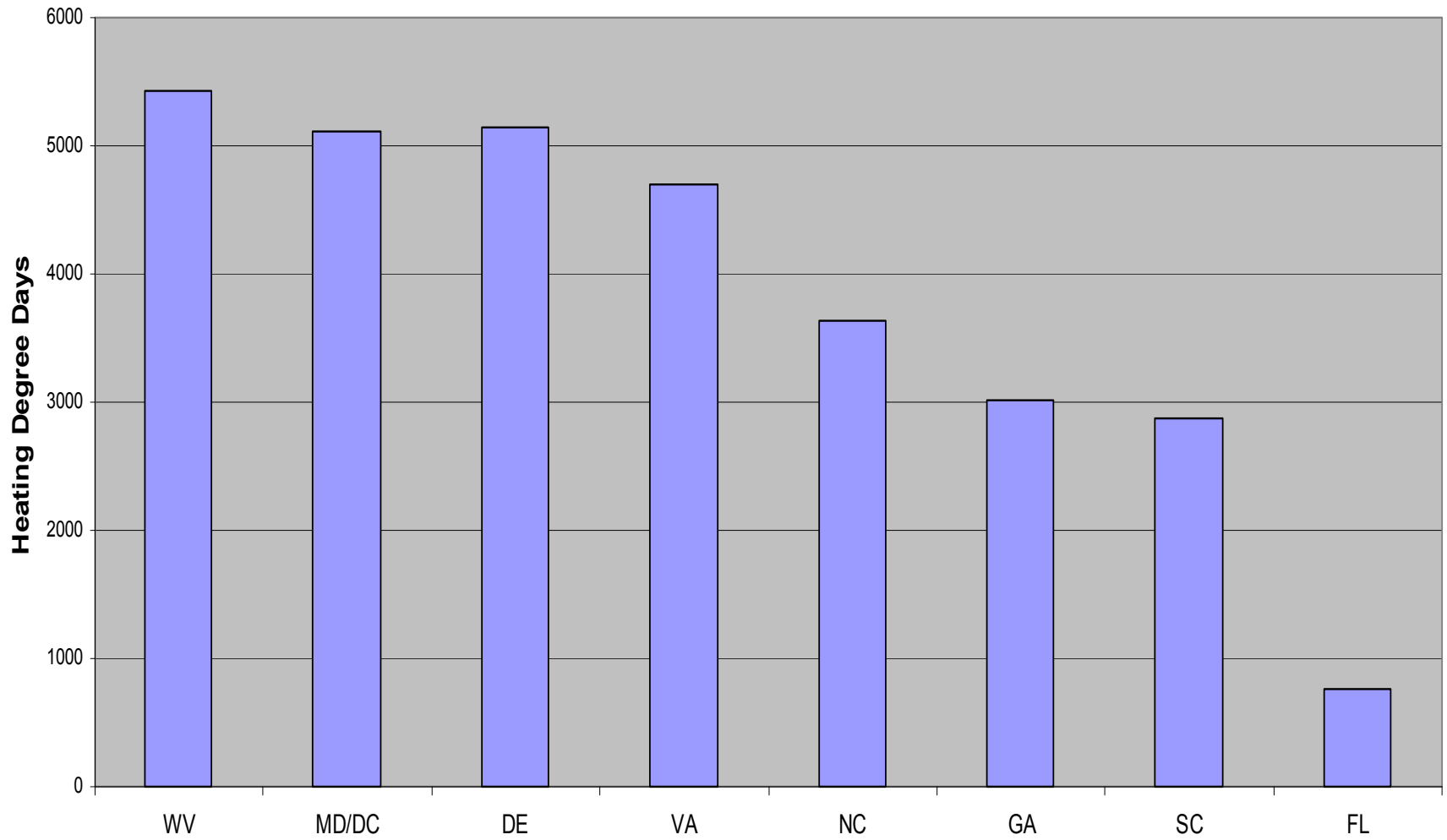
## Heating Degree Days for 2002/2003



**Average Residential Building Permits, 2000-2003, Mountain States**

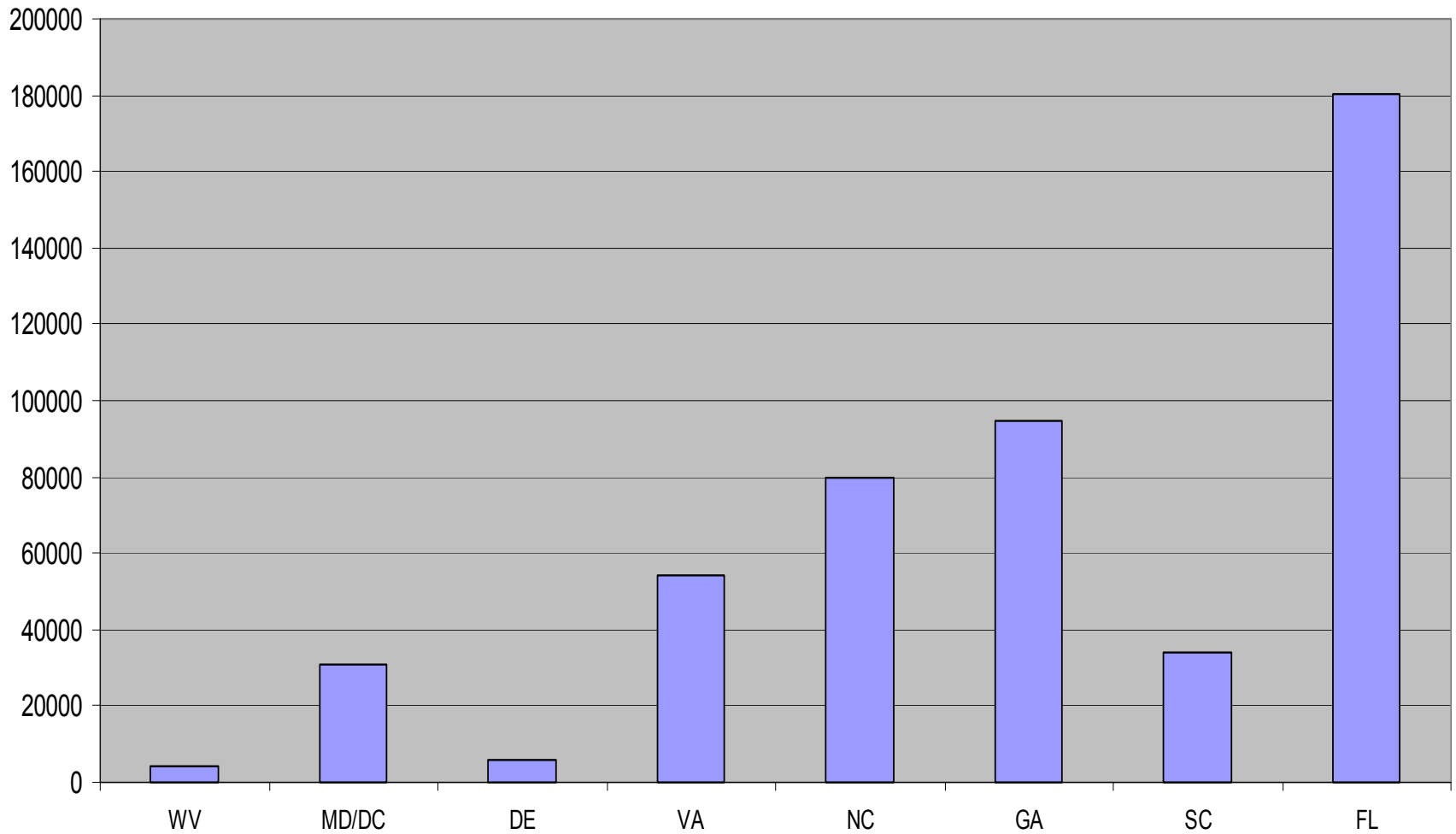


## Heating Degree Days for 2002/2003





## Average Residential Building Permits, 2000-2003, South Atlantic States



# Climate Zones for IECC Building Standards

